Amendment to the claims

Claims 1-27 and 35-50 are cancelled without prejudice to the Applicant's rights to pursue the subject matter in the present or future application.

1-27. (Canceled)

28. (Original): A method of identifying compounds that enhance learning and memory in a subject by increasing expression of NR2B genes in the subject, which comprises exposing a cell *in vitro* to a test compound suspected of up-regulating NR2B expression and determining whether NR2B expression is increased, an increase in the expression being indicative that the test compound enhances learning and memory in the subject by increasing expression of NR2B genes in the subject.

29. (Currently amended): The method of claim 28 wherein said cell comprises an exogenous nucleic acid molecule encoding NR2B, and wherein said determining step comprises comparing NMDA receptor function of a treated, non-fransgenic cell with NMDA receptor function of said cell comprising said exogenous nucleic acid, wherein a change in NMDA receptor function in the treated, non-transgenic cell that comprises the same features of NMDA receptor function exhibited in the transgenic cell being indicative that the test compound enhances learning and memory in a subject by affecting expression of NR2B or activity of NMDA receptors.

30. (Original): The method of claim 29, wherein the cells are disposed within a tissue.

31. (Original): The method of claim 30, wherein the tissue is disposed within a living animal.

32. (Original): The method of claim 30, wherein the NMDA receptor function is measured electrophysiologically.

33. (Original): The method of claim 32, wherein the NMDA receptor function is measured by measuring peak amplitude or channel decay time of NMDA receptors.

34. (Original): The method of claim 31, wherein the NMDA receptor function is measured using behavioral tests of learning and memory.

35-50. (Canceled)